

Clinical, Endoscopic Profile and Management of Patients with Upper Gastrointestinal Bleeding in Tertiary Care Center in Southern Karnataka

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ABSTRACT

Introduction: Upper gastrointestinal bleed (UGIB) is one of the common medical emergencies and is associated with significant morbidity and mortality. Early upper GI endoscopy helps in identifying the etiology and allows for targeted endoscopic treatment resulting in reduced morbidity, hospital stay, risk of re-bleeding and need for surgery. This study aimed to assess the clinical and endoscopic profile and treatment modalities for the patients presenting with upper GI bleed in a tertiary care centre in southern Karnataka.

Material and methods: Data of 410 patients presenting with upper GI bleed to tertiary care centre and who had undergone upper GI endoscopy at AJ hospital and research centre between January 2017 to June 2018 were retrospectively analysed.

Results: All the patients included in the study were above 18 years of age. Majority of the patients were males, with male to female ratio is 5.1:1. It was found that majority of patients presented with hematemesis (87.32%). It was found that most common lesion in upper GI bleed was esophageal varices (44.88%). Based on their endoscopic profiles majority of the patients were managed conservatively (64.15%).

Of the 410 patients 83.66% were males and mean age of study population was 54.37%. The most common presenting manifestation in hematemesis with malena observed in 61.95% patients.

Conclusion: This study highlights variceal bleed as the most common cause of upper GI bleed in southern India followed by peptic ulcer disease.

Keywords: Clinical, Endoscopic Profile, Upper Gastrointestinal Bleeding,

varices and portal hypertensive gastropathy, second most common cause being peptic ulcer disease, other causes include erosive gastritis, reflux esophagitis, Mallory weiss tear, malignancy etc.

Patients with age more than 60 years had mortality rates ranging from 12-35%, patients with age less than 60 years was <10% and overall mortality rates of 5-11%, as noted in previous studies.^{8,9}

There is a two-fold greater male predilection, however the death rates are similar in both sexes.¹⁰ The factors predisposing to upper GI bleed was largely linked to lifestyle of affected patients.

The primary diagnostic test for evaluation of upper GI bleed is endoscopy, which has a sensitivity of 92-98% and specificity of 30-100%.¹¹

This study aimed to know the clinical and endoscopic profile of middle aged and elderly patients presenting with upper GI bleed, to know the etiology of the disease and the intervention patients underwent.

MATERIAL AND METHODS

A total of 410 patients presented with upper GI bleeding to A.J institute of medical sciences between January 2017 to July 2018 and underwent upper GI endoscopy, out of which clinical and endoscopic data of 410 patients, aged more than 18 years or more, was compiled and analysed in this study retrospectively. Patients below 18 years of age and with coagulation disorders were excluded. The data analysed included a history of GI bleeding (hematemesis and malena), risk factors for liver disease including alcoholism. All patients in the study received the standard line of management for upper GI bleeding. Patients were subjected to upper GI endoscopy, preferably within the first 24 hours, after taking an informed consent. Endoscopy was

INTRODUCTION

Upper GI bleed is defined as bleeding derived from a source proximal to ligament of treitz, is a common and potentially life threatening GI emergency with a wide range of clinical severity, ranging from insignificant bleeds to catastrophic exsanguinating haemorrhage.¹ The upper GI bleed was found to have an incidence of 50-150/100,000 population per year.² It is seen that 70% of the patients presenting with upper GI bleed are more than 60 years of age and above.^{3,4} With the increasing incidence of use of NSAIDs in the elderly, the patients presenting the above cause in about two third the population also due to high prevalence to comorbid conditions (like cardiovascular disease)^{5,7}

Patients with upper GI bleed can be divided into variceal and non variceal sources of bleed each have different protocols of management and prognosis.⁶ The first and the most common cause is portal hypertension resulting in gastroesophageal

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performed with pharyngeal anaesthesia with 15% lidocaine local anaesthetic spray.

STATISTICAL ANALYSIS

The collected data was analysed with descriptive statistics such as mean, standard deviation (SD), frequency and

Gender	Number	Percent
Male	343	83.66
Female	67	16.34
Total	410	100.00

Table-1: Gender wise distribution

Age groups	Number	Percent
<=20yrs	11	2.68
21-30yrs	23	5.61
31-40yrs	32	7.80
41-50yrs	78	19.02
51-60yrs	112	27.32
61-70yrs	106	25.85
>=71yrs	48	11.71
Total	410	100.00
Mean age	54.37	
SD age	14.57	

Table-2: Age wise distribution

Indications	Present	%	Absent	%
chronic liver disease with hemetemesi	142	34.64	268	65.36
Hemetemesi	106	25.85	304	74.15
Hemetemesi with malena	254	61.95	156	38.05
Malena	50	12.20	360	87.80
Cld s/p EVL with hemetemesi	42	10.24	368	89.76

Table-3: Distribution of patients by indications

Endoscopic findings	Present	%	Absent	%
Normal study	44	10.73	366	89.27
Esophageal varices	184	44.88	226	55.12
Large esophageal varices	101	24.63	309	75.37
Small esophageal varices	83	20.24	327	79.76
Duodenal ulcer	59	14.39	351	85.61
Forrest classification 1	4	0.98	406	99.02
Forrest classification 2	9	2.20	401	97.80
Forrest classification 3	46	11.22	364	88.78
Gastric ulcer	101	24.63	309	75.37
Forrest classification 1	3	0.73	407	99.27
Forrest classification 2	4	0.98	406	99.02
Forrest classification 3	94	22.93	316	77.07
Peptic ulcer disease	148	36.10	262	63.90
Esophagitis with esophageal ulcers	45	10.98	365	89.02
Mallory weiss tear	26	6.34	384	93.66
Duodenal erosions	49	11.95	361	88.05
Gastric erosions	89	21.71	321	78.29
Post evl ulcers	30	7.32	380	92.68
Malignancy	7	1.71	403	98.29
Portal duodenopathy	16	3.90	394	96.10
Portal hypertensive gastropathy	129	31.46	281	68.54
H pylori positive	74	18.05	336	81.95

Table-4: Distribution of patients by endoscopic findings

percentages. The results were displayed in tables and figures with continuous variables presented as mean±SD and categorical variables presented as numbers and percentages.

RESULTS

In our study, a total of 410 patients with upper GI bleed were taken from our institute- AJ institute of medical sciences, Mangalore, Karnataka from the study period of January 2017 to July 2018.

Parameters used for study were:

1. Etiology of patient
2. Endoscopic findings seen in the patient
3. Intervention done for the patient.

Demographic data:

The population comprised of 343 males (83.66%) and 67 females (16.34%) with a male is to female ratio of 5.1:1 (table-1).

All the patients included in the study were above 18 years of age and the eldest patient was 90 years old. The most affected age group was between 51-70 years (Table-2).

Etiology of patient

After studying the clinical profile of the patients it was found that majority of patients presented with hematemesis with malena (61.95%) and hematemesis alone (25.85%) and

Intervention	Present	%	Absent	%
Conservative	263	64.15	147	35.85
EVL	119	29.02	291	70.98
Glue injection	16	3.90	394	96.10
Adrenaline injection	10	2.44	400	97.56
Hemoclipping	9	2.20	401	97.80

Table-5: Distribution of patients by mode of intervention

malena alone (12.20%). Among these patients CLD with hematemesis was 34.64% and CLD s/p endoscopic variceal ligation (EVL) who presented with hematemesis were 10.24% as described in Table-3

Endoscopic findings seen in the patient

These patients were subjected to endoscopic evaluation and the data was compiled and studied and it was found that most common lesion in upper GI bleed was esophageal varices (44.88%) out of which 24.63% had large esophageal varices and 20.24% had small esophageal varices. The second most common cause was peptic ulcer disease (35.12%) out of which gastric ulcer (24.63%) was more common than duodenal ulcer (14.39%). Portal hypertensive related causes (portal hypertensive gastropathy, portal duodenopathy), were seen in 35.36% of patients. Mallory Weiss tear was seen in 6.34% and patients who previously underwent EVL with ulcers were about 7.32%. Biopsy for *Helicobacter pylori* was positive in 18.05%. The complete list of lesions is shown in table 4

Intervention done for the patient

Based on the endoscopic profile of the patient's intervention was planned. Majority of the patients were managed conservatively (64.15%). The other patients were managed with EVL (29.02%), glue injection (3.92%), adrenaline injection (2.44%) and hemoclipping (2.20%). The list of intervention is put up in table 5

DISCUSSION

Upper GI bleed is a common medical emergency seen in tertiary care centres. Most of the patients presenting are elderly and have pre-existing co morbid conditions which contribute to high mortality in these patients.

Our study aimed at studying the clinical and endoscopic profile and intervention of patients who presented with upper GI bleed in a tertiary care centre.

Between January 2017 to July 2018, 410 patients were brought to our hospital with upper GI bleed, out of which 344 were about 40 years of age, which was showing that 83.9% were elderly (above 40 years of age). In a study done by Lakhwani *et al.*,²¹ upper GI bleeding was more common in age group of 60 years.

Out of 410 patients in our study, upper GI bleed was found to be more common in men (83.66%) as compared to women (16.34%). In a study done by Kashyap *et al.* found out that, out of 111 patients with upper GI bleeding included in their study, 78.4% were males.¹⁹ A study by Rodrigues and Shenoy *et al* showed that out of all patients with upper GI bleed 74.2% were males and 25.8% were females.²³ In another study done

by Singh and Panigrahi from coastal Odisha, India it was found that upper GI bleed is more common in males than females, with male to female ratio of 6:1.²²

In our study, out of total 410 patients the majority (61.95%) presented with both hematemesis and malena, while (25.85%) presented with hematemesis only, and (12.20%) had malena only. In studies done by Singh and Panigrahi,²² and Bambha *et al.*,²⁴ malena was the presenting complaint in 95.06% and 19% patients, respectively, and hematemesis was present in 43.09% and 28% patients, respectively, while both hematemesis and malena were seen in 41.78% and 52% patients, respectively.

In the present study 80.24% of patients had portal hypertension related varices, gastropathy, duodenopathy and 35.12% of patients had peptic ulcer disease. And other causes including 6.34% of patients with Mallory Weiss tear, 21.71% of patients with gastric erosions/gastritis, 11.95% patients with duodenal erosions, 18.05% patients with *Helicobacter pylori* positive, 7.32% patients with post EVL ulcers, 1.71% patients with gastric malignancy.

When considering variceal versus nonvariceal bleed as etiology of upper GI bleed, there are variable results in India. In a recent study conducted in eastern India in 2015, duodenal ulcer was found to be the most common cause of upper GI bleed (41%) and variceal bleed was found in only 13% patients.¹⁴ variceal bleeding was found in higher number of patients because ALD is highly prevalent in south Indian region.

Rapid clinical evaluation and resuscitation is the first thing to be done while attending unstable patients with severe bleeding, followed by the diagnostic evaluation. Early upper GI endoscopy (within 24 hours of presentation) is recommended in most patients as it confirms the diagnosis and helps in targeted endoscopic treatment, resulting in decreased morbidity and mortality.^{12,13} Surgical intervention may be required in patients with severe and persistent bleeding.

CONCLUSION

The present study reported portal hypertension as the most common cause of upper GI bleeding, followed by peptic ulcer disease. The most common endoscopic lesions reported were esophageal varices followed by gastric and duodenal ulcers. The most common type of management is medical conservative treatment followed by EVL banding.

REFERENCES

1. Rockall TA, Logan RF, Devlin HB, Northfield TC. Selection of patients for early discharge or outpatient

- care after acute upper gastrointestinal haemorrhage. National audit of acute upper gastrointestinal haemorrhage. *Lancet* 1996;347:1138-40.
2. Thomopoulos KC, Vagenas KA, Vagianos CE, Margaritis VG, Blikas AP, Katsakoulis EC, et al. Changes in aetiology and clinical outcome of acute upper gastrointestinal bleeding during the last 15 years. *Eur J Gastroenterol Hepatol* 2004;16:177-82.
 3. van Leerdam ME, Vreeburg EM, Rauws EA, Geraedts AA, Tijssen JG, Reitsma JB, et al. Acute upper GI bleeding: Did anything change? Time trend analysis of incidence and outcome of acute upper GI bleeding between 1993/1994 and 2000. *Am J Gastroenterol* 2003;98:1494-9.
 4. Rockall TA, Logan RF, Devlin HB, Northfield TC. Incidence of and mortality from acute upper gastrointestinal haemorrhage in the United Kingdom. Steering Committee and members of the National Audit of Acute Upper Gastrointestinal Haemorrhage. *BMJ* 1995;311:222-6.
 5. Srygley FD, Gerardo CJ, Tran T, Fisher DA. Does this patient have a severe upper gastrointestinal bleed? *JAMA* 2012;307:1072-9.
 6. Ginn JL, Ducharme J. Recurrent bleeding in acute upper gastrointestinal hemorrhage: Transfusion confusion. *CJEM* 2001;3:193-8.
 7. Yamaguchi Y, Yamato T, Katsumi N, Morozumi K, Abe T, Ishida H, et al. Endoscopic hemostasis: Safe treatment for peptic ulcer patients aged 80 years or older? *J Gastroenterol Hepatol* 2003;18:521-5.
 8. Christensen S, Riis A, Nørgaard M, Sørensen HT, Thomsen RW. Short-term mortality after perforated or bleeding peptic ulcer among elderly patients: A population-based cohort study. *BMC Geriatr* 2007;7:8.
 9. British Society of Gastroenterology Endoscopy Committee. Non-variceal upper gastrointestinal haemorrhage: Guidelines. *Gut* 2002;51 Suppl 4:iv1-6.
 10. Meaden C, Makin AJ. Diagnosis and treatment of patients with gastrointestinal bleeding. *Curr Anaesth Crit Care* 2004;15:123-32.
 11. Jaskolka JD, Binkhamis S, Prabhudesai V, Chawla TP. Acute gastrointestinal hemorrhage: Radiologic diagnosis and management. *Can Assoc Radiol J* 2013;64:90-100.
 12. Rockall TA, Logan RF, Devlin HB, Northfield TC. Risk assessment after acute upper gastrointestinal haemorrhage. *Gut* 1996;38:316-21.
 13. Barkun AN, Bardou M, Kuipers EJ, Sung J, Hunt RH, Martel M, et al. International consensus recommendations on the management of patients with nonvariceal upper gastrointestinal bleeding. *Ann Intern Med* 2010;152:101-13.
 14. Panigrahi PK, Mohanty SS. A study on endoscopic evaluation of upper gastrointestinal bleeding. *J Evid Based Med Healthc* 2016;3:1245-52.
 15. Anand D, Gupta R, Dhar M, Ahuja V. Clinical and endoscopic profile of patients with upper gastrointestinal bleeding at tertiary care center of North India. *J Dig Endosc* 2014;5:139-43.
 16. Gajendra O, Ponsel T, Varghese J, Sadasivan S, Nair P, Narayanan VA. Single center study of upper GI endoscopic findings in patients with overt and occult upper GI bleed. *Indian J Gastroenterol* 2009;28:A111.
 17. Lakhani K, Mundhara S, Sinha R, Gamit Y, Sharma R. Clinical Profile of Acute Upper Gastro Intestinal Bleeding. Available from: http://www.japi.org/july_2008/gastro_enterology_hepatology. [Last accessed on 2012 Feb 15].
 18. Krishnakumar R, Padmanabhan P, Premkumar, Selvi C, Ramkumar, Joe A. Upper GI bleed - A study of 408 cases. *Indian J Gastroenterol* 2007;26 Suppl 2:A133.
 19. Kashyap R, Mahajan S, Sharma B, Jaret P, Patial RK, Rana S, et al. A clinical profile of acute upper gastrointestinal bleeding at moderate altitude. *JACM* 2005;6:224-8.
 20. Rathi P, Abraham P, Rajeev Jakareddy, Pai N. Spectrum of upper gastrointestinal bleeding in Western India. *Indian J Gastroenterol* 2001;20 Suppl 2:A37.
 21. Lakhwani MN, Ismail AR, Barras CD, Tan WJ. Upper gastrointestinal bleeding in Kuala Lumpur hospital, Malaysia. *Med J Malaysia* 2000;55:498-505.
 22. Singh SP, Panigrahi MK. Spectrum of upper gastrointestinal hemorrhage in coastal Odisha. *Trop Gastroenterol* 2013;34:14-7.
 23. Rodrigues G, Shenoy R, Rao A. Profile of nonvariceal upper gastrointestinal: Bleeding in a tertiary referral hospital. *Internet J Surg* 2004;5:17-22.
 24. Bambha K, Kim WR, Pedersen R, Bida JP, Kremers WK, Kamath PS, et al. Predictors of early re-bleeding and mortality after acute variceal haemorrhage in patients with cirrhosis. *Gut* 2008;57:814-20.
 25. Chalasani N, Kahi C, Francois F, Pinto A, Marathe A, Bini EJ, et al. Improved patient survival after acute variceal bleeding: A multicenter, cohort study. *Am J Gastroenterol* 2003;98:653-9.
 26. Carbonell N, Pauwels A, Serfaty L, Fourdan O, Lévy VG, Poupon R, et al. Improved survival after variceal bleeding in patients with cirrhosis over the past two decades. *Hepatology* 2004;40:652-9.

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